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(54) Title: AZA-PEPTIDES

(57) Abstract: Provided are peptides comprising at least one azaamino acid and having β-sheet breaking ability, useful in the treatment and prevention of diseases such as alzheimer's disease, Dementia Pugilistica (including head trauma), Hereditary Cerebral Haemorrhage with amyloidosis of the Dutch type (HCHWA-D) and Vascular Dementia with amyloid angiopathy.





PCT/EP 03/15033

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07K7/06 A61K38/04 C07C281/06 C07D231/04 \ C07C281/02 A61K31/415 A61K31/175 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) CO7K A61K CO7C CO7D Documentation searched other than minimum documentation to the extent that such documents are included. In the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, CHEM ABS Data, EMBASE C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages Category 9 "AZATIDES: SOLUTION AND 1-20 HAN H ET AL: Α LIQUID PHASE SYNTHESES OF A NEW PEPTIDOMIMETIC" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US. vol. 118, no. 11, 20 March 1996 (1996-03-20), pages 2539-2544. XP002046408 ISSN: 0002-7863 cited in the application Page 2540; Schemes 1 and 2 page 2540; figure 1 -/--Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date "L" document which may throw doubts on priority claim(s) or which is clied to establish the publication date of another citation or other special reason (as specified) 'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *O* document referring to an oral disclosure, use, exhibition or document published prior to the international filing date but later than the priority date claimed '&' document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 1 7. 08. **04** 27 April 2004 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Jenn, T Fax: (+31-70) 340-3016

Interponal Application No PCT/EP 03/15033

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C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT					
Category °	Citation of document, with Indication, where appropriate, of the relevant passages		Relevant to claim No.			
A	WO 01/34631 A (AXONYX INC) 17 May 2001 (2001-05-17) cited in the application abstract; claim 14 page 12, line 11 - page 21, line 15	·	1-20			
A	US 5 948 763 A (BAUMANN MARC H ET AL) 7 September 1999 (1999-09-07) cited in the application abstract; claims 1-14 column 5, line 29 - line 41		1-20			
A	HETENYI C ET AL: "COMPUTATIONAL STUDIES ON THE BINDING OF BETA-SHEET BREAKER (BSB) PEPTIDES ON AMYLOID BETAA(1-42)" JOURNAL OF MOLECULAR STRUCTURE (THEOCHEM), ELSEVIER SCIENCE PUBLISHERS B.V., AMSTERDAM, NL, vol. 542, 2001, pages 25-31, XP001146365 ISSN: 0166-1280 cited in the application abstract page 25, left-hand column, line 1 - right-hand column, line 7 page 28, right-hand column, line 15 - page 29, left-hand column, line 3		1-20			
A	GANTE J: "AZAPEPTIDES" SYNTHESIS, GEORG THIEME VERLAG. STUTTGART, DE, no. 6, 1 June 1989 (1989-06-01), pages 405-413, XP000035384 ISSN: 0039-7881 cited in the application the whole document		1–20			
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national application No. PCT/EP 03/15033

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)						
This international Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:						
Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:						
Claims Nos.: because they relate to parts of the international Application that do not comply with the prescribed requirements to such an extent that no meaningful international Search can be carried out, specifically:						
Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a). .						
Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)						
This international Searching Authority found multiple inventions in this international application, as follows:						
see additional sheet						
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.						
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.						
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:						
4. No required additional search fees were timely paid by the applicant. Consequently, this international Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-12,13-19(part),20						
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.						

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12 (all in full), 13-19 (all in part), 20 (full)

A compound of formula I as defined in claim 1; A pharmaceutical composition comprising it; The use of said compound for the manufacture of a medicament for the treatment or prevention of Alzheimer's disease, Dementia pugilistica, HCHWA-D, vascular dementia with amyloid angiopathy, or of a disease associated with abnormal protein folding into amyloid and amyloid-like deposits; A process for the preparation of said compound.

2. claims: 13-19 (all in part)

A process for the preparation of an azapeptide different from the compound of formula I as defined in claim 1, comprising the step of reacting an aza-amino acid building block of formula II to form an aza-peptidoic bond.

3. claims: 21-22 (all in full)

A synthetic aza-peptide building block having a formula selected from formulae III, IV, V and VI.

information on patent family members

Interponal Application No PCT/EP 03/15033

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